

Richard F. Daines, M.D.
Commissioner

Wendy E. Saunders
Executive Deputy Commissioner

**New York State Department of Health (NYSDOH)
Guidance for Correctional and Detention Facilities for Prevention and Assessment of
Novel Influenza A (H1N1) Virus Infections
June 8, 2009**

Please note: This guidance is intended for providers seeing patients outside of New York City. For guidance related to providers seeing patients in New York City, see the New York City Department of Health and Mental Hygiene (NYCDOHMH) Advisories at: www.nyc.gov/health/nycmed.

This document provides interim guidance for correctional facilities and detention centers in New York State outside of New York City for monitoring and assessment of suspected cases of novel influenza A (H1N1) in inmates and staff and for ensuring protection of the health and safety of inmates, staff, and visitors.

Background

Correctional institutions pose special risks and considerations due to the nature of their unique environment. Inmates are in mandatory custody and options are limited for isolation and removal of ill persons from the environment. The workforce must be maintained and options are limited for work alternatives (e.g., work from home, reduced or alternate schedules, etc.). In addition, many inmates and workforce members may have medical conditions that increase their risk of influenza-related complications. The focus of this guidance is on general preventive measures for institutions, risk reduction of introduction of the virus into institutions, rapid detection of persons with novel influenza A (H1N1) infections, and management and isolation of identified cases.

Clinical assessment

Medical providers at correctional facilities should consider novel influenza A (H1N1) virus in the differential diagnosis of any inmate or staff member presenting with influenza-like illness (ILI). ILI is defined as fever (a measured temperature $\geq 37.8^{\circ}\text{C}$ [100°F]) and cough or sore throat. Patients with confirmed uncomplicated novel influenza A (H1N1) disease have experienced fever, chills, headache, cough, sore throat, rhinorrhea, shortness of breath, myalgias, arthralgias, fatigue, vomiting, or diarrhea. The estimated incubation period is unknown but is likely to range from 1-7 days, and more likely 1-4 days.

The presence of influenza in the facility should heighten clinical diagnostic suspicion. **In high-risk patients, early recognition of possible ILI and rapid initiation of presumptive antiviral treatment (see below) are highly recommended, regardless of pending influenza testing results.**

High-risk populations

At this time, a person considered at high-risk for complications of novel influenza A (H1N1) virus infection is the same as for seasonal influenza. As more epidemiologic and clinical data become available, these risk groups might be revised. High-risk populations include:

- Children <5 years old (the risk for severe complications from seasonal influenza is highest among children <2)
- Adults ≥65 years
- Persons with the following conditions: Chronic pulmonary (including asthma), cardiovascular (except hypertension), renal, hepatic, hematological (including sickle cell disease), neurologic, neuromuscular, or metabolic disorders (including diabetes mellitus)
- Immunosuppression, including that caused by medications or by HIV
- Pregnant women
- Persons <19 years who are receiving long-term aspirin therapy
- Residents of nursing homes and other chronic-care facilities

Illness surveillance

Illness surveillance activities are critical in correctional and detention facilities because rapid detection of cases and implementation of appropriate mitigation measures will help to limit the transmission of novel influenza A (H1N1) virus to other inmates and staff. The following illness surveillance activities should be used to detect possible cases:

- Instruct inmates and staff to report symptoms of ILI to the facility medical provider at the first sign of illness.
- Evaluate all incoming inmates upon entry and isolate if they display symptoms of ILI. Any person with ILI should be asked to wear a surgical mask and be placed in an individual cell if possible pending further evaluation.
- Consider daily temperature checks in units where ILI cases are identified.
- Testing of some persons with ILI for influenza novel influenza A (H1N1) and seasonal influenza should be done to determine what viruses may be circulating at the institution (see section below on testing recommendations).

Testing recommendations

Because of the implications for association with a potential outbreak, all inmates presenting with ILI should be tested initially at the facility for influenza A by commercially available rapid antigen testing or immunofluorescence (DFA or IFA), if available. If testing is unavailable at the facility, inmates presenting with ILI should be reported to the local health department to discuss options for testing.

Currently in New York State, only public health laboratories can perform the testing needed to **confirm** novel influenza A (H1N1). Reporting should be done on the following patients to determine whether testing for novel influenza A (H1N1) is indicated:

- In a facility with NO confirmed novel influenza A (H1N1), any inmate presenting with ILI who tests positive for influenza A, who tests positive for influenza but typing is not available, or who is not tested but highly suspicious for novel influenza A (H1N1) (ie. known contact with a confirmed case or recent travel to an area with widespread circulating novel influenza A (H1N1) in the community)
- All inmates hospitalized with acute febrile respiratory illness (ILI; fever and pneumonia, ARDS, or respiratory distress)
- Inmates with milder ILI who are part of a cluster

County jails should report inmates who meet the reporting criteria to their local health department. The New York State Department of Correctional Services should report inmates

who meet the reporting criteria to the NYSDOH, Bureau of Communicable Disease Control at (518) 473-4439.

Specimens from correctional facilities meet high priority for confirmatory testing; however, once disease is confirmed in a facility, it may not be necessary or appropriate to continue conducting ongoing confirmatory testing on all ill inmates. Because influenza testing takes time and the rapid test for influenza is not sensitive for the detection of seasonal or novel influenza A (H1N1), providers should initiate early, empiric antiviral treatment for all inmates with acute febrile respiratory illness who are at high risk for complications from influenza.

Antiviral treatment for novel influenza A (H1N1) virus

Antiviral treatment is ***recommended*** for the following inmates:

1. Confirmed, probable, or suspected cases of novel influenza A (H1N1) infection in hospitalized patients.
2. Confirmed, probable, or suspected cases of novel influenza A (H1N1) infection in patients with milder illness who are at high-risk for influenza complications.

Clinical judgment is an important factor in treatment decisions. Persons with suspected novel influenza A (H1N1) infection who present with an uncomplicated febrile illness typically do not require treatment unless they are at higher risk for influenza complications. Many patients who have had novel influenza A (H1N1) infection, but who are not in a high-risk group, have had a self-limited respiratory illness similar to typical seasonal influenza. For most of these patients, the benefits of using antivirals may be modest. Therefore testing, treatment, and chemoprophylaxis efforts should be directed primarily at persons who are hospitalized or at higher risk for influenza complications.

Antiviral treatment with zanamivir or oseltamivir should be initiated as soon as possible (ideally within 48 hours) after the onset of symptoms. For patients with severe disease, treatment can be initiated at any point, but is most effective earlier in the course of illness. Recommended duration of treatment is 5 days. Novel influenza A (H1N1) is sensitive (not resistant) to the neuraminidase inhibitors, oseltamivir and zanamivir, and resistant (not sensitive) to the adamantanes, amantadine and rimantadine. Note that zanamivir is not recommended for patients with underlying pulmonary disease, such as asthma or chronic obstructive pulmonary disease. Antiviral treatment recommendations for seasonal influenza may differ and can be found at: <http://www.cdc.gov/flu/professionals/antivirals/index.htm>.

Antiviral chemoprophylaxis for novel influenza A (H1N1) virus

Post-exposure prophylaxis is ***recommended*** for the following individuals:

1. All inmates who are high risk for influenza complications and who are close contacts of a person with confirmed, probable, or suspected novel influenza A (H1N1) virus. Close contacts would include inmates confined to the same cell with an ill person or having been in a setting where there was a high likelihood of contact with respiratory droplets and/or body fluids of ill persons.
2. Health care workers who were not using appropriate personal protective equipment (PPE) during close contact with an ill confirmed, probable, or suspected case of novel influenza A (H1N1) infection during the case's infectious period.

When chemoprophylaxis is indicated, either oseltamivir or zanamivir should be initiated as soon as possible following the exposure and should continue for **10 days** following the last known exposure to novel influenza A (H1N1) virus infection. Note that zanamivir is not recommended for patients with underlying pulmonary disease, such as asthma or chronic obstructive pulmonary disease. Antiviral chemoprophylaxis recommendations for seasonal influenza may differ and can be found at: <http://www.cdc.gov/flu/professionals/antivirals/index.htm>.

Providers should take into account the patient’s infectious period when making decisions regarding antiviral prophylaxis. The infectious period for persons infected with the novel influenza A (H1N1) virus is assumed to be similar to seasonal influenza. With seasonal influenza, studies have shown that people may be able to transmit infection beginning one day before they develop symptoms to up to 7 days after they get sick or 24 hours after resolution of symptoms, whichever is longer. Children, especially younger children, may be infectious for longer periods. However, for this guidance, the *infectious period* is defined as one day before until 7 days after the case’s onset of illness. If the contact occurred with a case whose illness started more than 7 days before contact with the person under consideration for antivirals, then chemoprophylaxis may not be indicated.

Table 1: Novel influenza A (H1N1) virus antiviral medication dosing recommendations
(Table extracted from Infectious Disease Society of America guidelines for seasonal influenza)

Agent, group		Treatment (5days)	Chemoprophylaxis (10 days)
Oseltamivir			
Adults		75-mg capsule twice per day	75-mg capsule once per day
Children ≥ 12 months	15 kg or less	60 mg per day divided into 2 doses	30 mg once per day
	15-23 kg	90 mg per day divided into 2 doses	45 mg once per day
	24-40 kg	120 mg per day divided into 2 doses	60 mg once per day
	>40 kg	150 mg per day divided into 2 doses	75 mg once per day
Zanamivir			
Adults		Two 5-mg inhalations (10 mg total) twice per day	Two 5-mg inhalations (10 mg total) once per day
Children		Two 5-mg inhalations (10 mg total) twice per day (age, 7 years or older)	Two 5-mg inhalations (10 mg total) once per day (age, 5 years or older)

* Oseltamivir use for children < 12 months old was recently approved by FDA under an Emergency Use Authorization (EUA).

Additional recommendations for management of suspect and confirmed cases

- Actively monitor the number, severity, and location of cases of ILI.
- Separate inmates with ILI from others by placing them in a medical isolation unit if possible. If the facility does not have a medical isolation unit, separating inmates with ILI in individual cells is appropriate. Consider separating cell mates of sick inmates for 48 hours for observation.
- Inmates with mild ILI should not be sent to the hospital as a routine. They should be given symptomatic treatment and instructed to return for in-house medical evaluation for any signs of worsening severity of illness.

- Inmates with severe ILI should only be sent to the hospital if hemodynamically unstable, having difficulty breathing, mental status changes, or if they otherwise appear seriously ill.
- Provide care of inmates with ILI, including scheduled temperature checks and access to increased fluids, and antiviral treatment when indicated. Also provide tissues, a plastic bag for the proper disposal of used tissues, and hand sanitizers.
- Restrict movements of inmates with ILI within the facility and restrict inmates from leaving, transferring from or to another facility during the 7 days after onset of symptoms or until 24 hours after symptoms resolve, whichever is longer, unless necessary for medical care, infection control, or lack of isolation space.
- If multiple inmates become ill with novel influenza A (H1N1), establish a designated area of the facility specifically for sick persons. Designate staff to care for these individuals only, and do not have these inmates circulating in other parts of the facility. Limit movement of designated staff between different parts of the facility to decrease the risk of staff spreading influenza to other parts of the facility.
- The decision to place any housing units with confirmed or probable cases of novel influenza A (H1N1) on medical isolation should be made based on the individual situation and the ability of the facility to restrict movements of patients from the housing unit.
- If there is ILI in the facility, cancel internal group gatherings and stagger group meals and other activities to provide more personal space between individuals. Consider temporarily suspending visitation or modifying visitation programs, when appropriate.
- Linens, eating utensils, and dishes belonging to those who are sick do not need to be cleaned separately, but they should not be shared without thorough washing. Linens (such as bed sheets and towels) should be washed by using laundry soap and tumbled dry on a hot setting. Individuals should avoid “hugging” laundry before washing it to prevent contaminating themselves. Individuals should wash their hands with soap and water or hand sanitizer immediately after handling dirty laundry.
- Assess and treat as appropriate soon-to-be released inmates with ILI or other flu symptoms and make direct linkages to community resources to ensure proper isolation and access to medical care.

Infection control measures

Due to accumulating evidence that novel influenza A (H1N1) is comparable to seasonal influenza in its spectrum of illness and transmission pattern and does not appear to be causing unusual mortality compared to seasonal influenza, NYSDOH is now recommending that infection control measures for novel influenza A (H1N1) be similar to those taken for seasonal influenza. Since novel influenza A (H1N1) is a novel virus, its clinical and epidemiologic features are only now being elucidated, and these recommendations are therefore subject to change. There is no effective vaccine and it is assumed that much if not all of the population is susceptible to the virus. It is also possible that this virus may become more virulent in the future, in which case these recommendations would be revised.

Efforts to maximize adherence to recommendations for seasonal influenza, including meticulous respiratory hygiene and cough etiquette, should be practiced in all facilities. This includes the placement of a surgical facemask on all persons with febrile respiratory illness when not isolated in an individual cell or medical facility, in order to reduce the spread of the virus to staff and other inmates. These infection control recommendations apply to ALL patients with influenza, including confirmed, probable, or suspect novel influenza A (H1N1), or with febrile respiratory illness.

In an infirmary or hospital setting:

- STANDARD and DROPLET precautions should be used for all routine medical care of patients with confirmed or suspect novel influenza A (H1N1) infection.
- Aerosol-generating procedures (e.g., bronchoscopy, intubation and extubation, and deep open tracheal suctioning) should be performed, when feasible, in a negative pressure (AIIR). Fit-tested N95 respirators and eye protection (goggles or face shield) should be worn by health care personnel performing these procedures.
- Any patient with febrile respiratory illness should be placed in a private room for medical care whenever possible.
- Patients should wear a surgical facemask when outside their room or when being transferred.
- Health care workers examining; caring for; or obtaining nasal, nasopharyngeal or pharyngeal specimens from patients with probable or confirmed novel influenza A (H1N1) or febrile respiratory illness should wear a surgical facemask.
- If tuberculosis is being considered, the patient should be placed in an AIIR and staff entering the room should wear a fit-tested N95 respirator.
- **Hand hygiene is absolutely essential** and should be performed before and after patient care, and before donning and after removal of a surgical facemask. Fit-tested N95 masks and eye protection (goggles or face shields) are *not* necessary except for aerosol-generating procedures as described above.
- Nebulized treatments for patients with febrile respiratory illness should be provided in a private room with closed door if at all possible or 6 feet apart at a minimum if a private room is not available. If private rooms are limited, reserve the private rooms for patients with febrile respiratory disease. If no private room is available, use a curtain or other barrier between patients who are in the same room when performing nebulized treatments.
- Visitors should be asked to perform hand hygiene before entering and after exiting the patient's room and advised to wear a surgical facemask while in the room with the patient.

In a clinic setting:

- Patients with febrile respiratory illness in outpatient settings should be asked to wear a surgical facemask, as tolerated, upon entry, while waiting, and while being examined and cared for.
- Staff who have close contact, including examining or providing direct medical care for inmates with febrile respiratory illness, should wear a surgical facemask and gloves, and should put the facemask on ideally before entering the room.
- Staff should be instructed to perform hand hygiene and put facemask on first followed by gloves. When patient care is complete, remove gloves first then facemask, and perform hand hygiene.
- If a nasopharyngeal swab or other respiratory specimen is being collected, the patient should be instructed to remove the facemask briefly for specimen collection, then replace the mask as soon as the specimen is obtained.
- Meticulous hand hygiene should be performed before and after removal of PPE and before and after patient care.

General prevention recommendations for the facility

The following measures may prevent the introduction of influenza into a facility:

- Potential visitors should be informed that anyone with current ILI may not enter the facility. Any visitor with ILI should wait at least 7 days after symptom onset or 24 hours after the resolution of symptoms (whichever is longer) before being allowed entry into the facility. When possible, facilities should use their usual communication channels to inform potential visitors of these rules before they travel to the facility. For example,

facilities can ask inmates to inform their family members and visitors. In addition, visitors should be informed via signage (e.g., visuals, posters) in the visiting areas.

- Consider placing limits to entry and exit from the facility and postponement or restriction of all activities involving visitors to the facility when inmates or staff are experiencing ILI.
- Staff with ILI should stay home (or be sent home if they develop symptoms while at the facility), and remain at home for 7 days or until 24 hours after symptoms resolve, whichever is longer. If they become ill while working, they should be instructed to report their illness to their supervisor and go home immediately. While waiting to go home, they should be asked to wear a surgical facemask and to sit away from other staff and inmates.
- Staff with ILI should follow-up, as indicated, with their health care provider to determine if antiviral treatment is indicated. Treatment is recommended for individuals with severe illness and individuals with milder symptoms who are at high risk for complications due to influenza.

The following measures may prevent influenza from being transmitted within a facility:

- Encourage all inmates, visitors, and staff to cover their cough or sneeze with a tissue. Throw all tissue in the trash after use. Maintain good hand hygiene by washing with soap and water, or using a hand sanitizer, especially after coughing or sneezing. Avoid touching eyes, nose and mouth without cleaning hands.
- Make the means for appropriate hand cleansing readily available within the facility, including intake areas where inmates are booked and processed, visitor entries and exits, visitation rooms, common areas, and staff-restricted areas, in addition to lavatories and food preparation and dining areas. The means for hand cleansing are ideally running water, soap, and hand drying machines or paper towels and waste baskets; alternatively, except in lavatories and food preparation areas, hand sanitizers may be used.
- Clean all common areas within the facility routinely and immediately, when visibly soiled, with the cleaning agents normally used in these areas. Eating utensils should be washed either in a dishwasher or by hand with water and soap. Cups and utensils should not be shared until after washing.
- Respiratory hygiene/cough etiquette should be implemented beginning at the first point of contact with a potentially infected person to prevent the transmission of all respiratory tract infections in the correctional settings.
- All staff, including health care personnel, should be encouraged to follow current vaccination recommendations and be offered the current season's influenza vaccine.

Protection of the Workforce

To prevent staff from becoming ill, the following measures are advised:

- Strict adherence to general hygiene practices should be followed.
- Follow current vaccination recommendations and offer the current season's influenza vaccine to unvaccinated staff and health care personnel.

Use of N95 respirators or facemasks generally is not recommended for workers in non-healthcare occupational settings for general work activities. For specific work activities that involve contact with people who have ILI, such as escorting a person with ILI, interviewing a person with ILI, providing assistance to an individual with ILI, the following are recommended:

- Workers should try to maintain a distance of 6 feet or more from the person with ILI;

- Workers should keep their interactions with ill persons as brief as possible;
- The ill person should be asked to follow good cough etiquette and hand hygiene and to wear a facemask, if able, and one is available;
- Workers at increased risk of severe illness from influenza infection should avoid people with ILI (possibly by temporary reassignment); and,
- Where workers cannot avoid close contact with persons with ILI, some workers may choose to wear a facemask on a voluntary basis.

Staff who are both at high risk for complications of H1N1 and who have been in close contact with inmates or other staff with ILI should be alerted to contact their healthcare providers to see if they should be given antiviral medication.